

AGU 2012 Fall Meeting

Global Precipitation Measurement (GPM) Mission Applications: Activities, challenges, and vision

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For submission to: **H046: Remote Sensing Applications in Hydrology**

<http://fallmeeting.agu.org/2012/session-search/single/remote-sensing-applications-in-hydrology/>

Global Precipitation Measurement (GPM) is an international satellite mission to provide next-generation observations of rain and snow worldwide every three hours. NASA and the Japan Aerospace Exploration Agency (JAXA) will launch a “Core” satellite carrying advanced instruments that will set a new standard for precipitation measurements from space. The data they provide will be used to unify precipitation measurements made by an international network of partner satellites to quantify when, where, and how much it rains or snows around the world. The GPM mission will help advance our understanding of Earth's water and energy cycles, improve the forecasting of extreme events that cause natural disasters, and extend current capabilities of using satellite precipitation information to directly benefit society.

Building upon the successful legacy of the Tropical Rainfall Measuring Mission (TRMM), GPM's next-generation global precipitation data will lead to scientific advances and societal benefits within a range of hydrologic fields including natural hazards, ecology, public health and water resources. This talk will highlight some examples from TRMM's 15-year history within these applications areas as well as discuss some existing challenges and present a look forward for GPM's contribution to applications in hydrology.